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September 13, 2004

To: Supervisor Don Knabe, Chairman
Supervisor Gloria Molina, Chair Pro Tem
Supervisor Yvonne B. Burke
Supervisor Zev Yaroslavsky
Supervisor Michael D. Antonovich

From: Jon W. Fullinwider
Chief Information Officer

Subject: **COMMUNICATIONS AND INFORMATION SHARING SYSTEM FEASIBILITY STUDY – FINAL REPORT**

This report responds to Supervisor Knabe's January 20, 2004 Board Motion, amended by Supervisor Yaraslovsky, which instructed the Chief Information Office (CIO) to:

1. Coordinate with the Chief Administrative Officer's Office of Emergency Management (OEM), the Sheriff, Fire Chief, Interim Director of Internal Services (ISD), Director of Public Works (DPW) and other departments as required, to assess the Candle Corporation NC4 System or any other applicable system as a solution for improving regional communications and status visibility into numerous national and local events effecting the general population and businesses located within the Los Angeles County region; and

2. Report back to the Board within 90 days with a report delineating the benefits, community value, implementation criterion, requirements for non-county department participation, projected time frame for a phased implementation, estimated startup and operating costs and requirements that would need to be addressed in developing a contract with the Candle Corporation or any other company into a public/private partnership.

The CIO coordinated with designated departments to identify potential data streams that were useful and available for sharing. A survey distributed to each department was used to identify data that had the highest value across departments and was also used to develop the criteria for assessing alternative solutions for an automated system. Implementation criteria included functionality, benefit to the community, risk, time and cost.

This report's findings indicate that the County would benefit from better information sharing, status visibility and notification among County departments. Timely, relevant, authoritative and valuable daily information displayed on a map or tabular format was found to be an aid for decision making, improved service levels, benefit public safety by providing early warnings, helpful to improve and minimize delays in emergency response and provide community value through bi-directional alert notifications to the business community and general population.

Some concerns were raised by participating departments regarding the ability of an automated system to provide security and confidentiality of information shared between agencies without monitoring and intervention by staff. This office believes that the technology solution recommended for this system adequately provides user definable filtering and access controls to secure data access. A proposed six-month proof-of-concept pilot will demonstrate that the operational, technical and cultural concerns expressed by these agencies can be resolved before a full system implementation is undertaken.

An analysis was conducted of six (6) representative pilot implementation strategies that included the Regional Alliance for Infrastructure and Network Security (RAINS), Defense Management Information Services (DIMS), National Center for Crisis and Continuity Coordination (NC4), Emergency Response Network (ERN), Joint Regional Information Exchange System (JRIES), e-Access Roswell/Tele-Works, the County's Emergency Management Information System (EMIS) and SBC/CGI Communications. The results of this analysis indicate that a joint effort with NC4 and SBC/CGI provide the best technical, operational and cost effective solution for a collaboration and notification system strategy.

Discussions with NC4 confirmed that they will participate in the pilot at no cost to the County for the use of their systems and support. However, the CIO must identify $25,000 to cover any out-of-pocket and customization expenses during the limited six-month pilot. One of the key objectives of the pilot is the potential capability for the system to be financially supported through private sector funding and in-kind County support. To confirm the viability of this strategy, this office has informally contacted two large businesses in the Los Angeles area who have indicated that they recognized value in a subscription-based access to the system for filtered information, in map and tabular form, deemed to be in the public domain. NC4 has successfully implemented a similar business model in New York City.

We will move forward with the implementation of a limited six-month pilot project unless we hear back from your Board by September 31, 2004. This pilot will demonstrate the value, benefits, operational and technical feasibility, and potential for a public/private sector partnership for a Los Angeles County Communications and Information Sharing System. Your Board will be provided with the final results of this pilot and we will continue to provide you with monthly status reports until the pilot has been completed.

My staff and representatives from the designated departments are available to discuss the study results and provide a demonstration of the NC4 system which is currently operational in many areas of the country. Please contact me at 213.974.2008, or in my absence, John McIntire, Associate CIO, at 213.974.2154, if a discussion and/or demonstration are required.

JWF:JM:ygd

Attachments

c: Executive Officer, Board of Supervisors
Chair, Information Systems Commission
Chief Administrative Officer
County Counsel
Fire Chief
Director and Chief Medical Officer, Department of Health Services
Director, Department of Public Works
Interim Director, Internal Services Department
Administrator, Office of Emergency Management

Feasibility Study

Communications and Information Sharing System

September 2004

Jon W. Fullinwider — *Chief Information Office*

Table of Contents

Appendices

Los Angeles County
Communications and Information Sharing
Feasibility Study

EXECUTIVE SUMMARY

The Board Motion of January 20, 2004 (Appendix 1) requested that the Chief Information Office (CIO) coordinate with designated departments to assess the Candle Corporation's NC4 System or other applicable systems to determine their potential as a solution for improving regional communications and status visibility into numerous national and local events effecting the general population and businesses located within the Los Angeles County region. Based on input from the County Sheriff, Fire, Chief Administrative Office's Office of Emergency Management, Internal Services, Public Works and Health Services Departments, this study identified numerous benefits that could be derived from a day-to-day communications and information sharing system. The study also identified specific data sharing opportunities and a strategy for implementing a communications and information sharing portal in Los Angeles County.

Study Approach

The CIO coordinated with the designated departments and with managerial, technical and operations staff members within each department and identified 35 potential data streams that are useful and available for sharing. A survey distributed to each department identified sources of data with the highest informational value across departments. Survey results were used to develop the criteria for assessing alternative solutions for an automated system. Implementation criteria included benefit to the community, risks, time to implement and cost.

Recommendations

The Board Motion asked for recommendations on an information-sharing program that will provide enhanced benefits to the community, value to the departments and will mitigate the County's exposure to risk, cost, and implementation time. This study finds that a commercial off-the-shelf analysis and visualization product in combination with a notification system appears to best meet the criteria identified in the departmental survey. This strategy will enable the County to aggregate incident and related information to identify patterns, trends and possible correlations between incidents, make this information visible and easily accessible in map and tabular formats and when required, send and receive alert notifications. This system will improve public safety and service levels across multiple departments resulting in significant benefit to our constituents and the private sector.

Based on our findings and issues presented in the study, it is recommended that the County move forward with a limited six-month proof-of-concept pilot that will enable the County to verify the operational feasibility of a Communications and Information Sharing System. This approach will resolve any remaining issues or concerns regarding an automated system's

capability to provide adequate role-based security and access controls and validate the benefits of a privately funded system and criteria for an on-going public/private partnership.

Based on an analysis of six (6) representative limited pilot implementation strategies that included the Regional Alliance for Infrastructure and Network Security (RAINS), Defense Management Information Services (DIMS), National Center for Crisis and Continuity Coordination (NC4), Emergency Response Network (ERN), Joint Regional Information Exchange System (JRIES), e-Access Roswell/Tele-Works, the County's Emergency Management Information System (EMIS) and SBC/CGI, the study recommends that NC4 and SBC/CGI provide the combined solution for collaboration and notification services. This determination is based on an analysis of current functional capabilities, time to implement, risks and agreement that software and support will be at no cost to the County.

NC4 indicates that they will participate in the pilot at no cost to the County for the use of their systems and support. However, $25,000 must be identified to cover any out-of-pocket and customization expenses for the limited six-month pilot. One of the key pilot objectives for all parties is the potential capability for the system to be supported through private sector funding and in-kind County support. To confirm the viability of this strategy, this office has informally contacted two large businesses in the Los Angeles area who have indicated that they would be interested in discussing a subscription to the system for filtered information, in map and tabular form, deemed to be in the public domain. NC4 has already implemented this model in New York City.

INTRODUCTION

January 20, 2004 Board Motion

This report responds to Supervisor Knabe's January 20, 2004 Board Motion, amended by Supervisor Yaraslovsky, which instructed the Chief Information Office to:

1. "Coordinate with the Chief Administrative Officer's Office of Emergency Management (OEM), the Sheriff, Fire Chief, Interim Director of Internal Services (ISD), Director of Public Works (DPW) and other departments as required, to assess the Candle Corporation/NC4 System or any other applicable system as a solution for improving regional communications and status visibility into numerous national and local events effecting the general population and businesses located within the Los Angeles County region; and

2. Report back to the Board within 90 days with a report delineating the benefits, community value, implementation criterion, requirements for non-county department participation, projected time frame for a phased implementation, estimated startup and operating costs and requirements that would need to be addressed in developing a contract with the Candle Corporation/NC4 or any other company into a public/private partnership"

This report provides an assessment of the feasibility for an automated County/region communications and information sharing system to address improving regional communications, visibility and status of incidents that may be precursors to major events at the local, state and national levels. The report includes an analysis of costs, benefits, the level of community involvement, and framework for assessing alternative systems, recommendations for a pilot implementation and the criteria for developing a contract to enter into a public/private partnership.

The County Environment Today

The County of Los Angeles has numerous sources of information needed to fulfill the mission of each of the County's departments. The CIO surveyed six (6) departments and found that there are 35 independent sources of available information used by these departments, some shared and some not, depending on historical or procedural precedents. In the past, cultural, technical or staffing barriers have prevented departments from sharing related information that may provide these departments with a better situational awareness and understanding of day-to-day events. One exception is the important collaboration that takes place during a major event that is supported by the County's (Emergency Management Information System) EMIS system. Fortunately, the County has experienced only a limited number of large-scale activations warranting the use of the EMIS over the last few years.

Purpose of the Information Sharing Feasibility Study

The Board recognizes that information sharing programs cannot be successful when information exchange occurs only at the time of infrequent, major events. Routine mechanisms to share information are essential to ensure that the procedures and protocols required for managing the information are not overlooked or forgotten when a major event occurs. The purpose of this study is to determine if day-to-day sharing of information is technically and operationally feasible, and if it is of value to the County, region and private sector participants.

FEASIBILITY STUDY METHODOLOGY

This feasibility study was conducted in phases: 1) through meetings with department representatives, 2) utilization of a detailed survey, 3) review and analysis of the survey results and 4) formulation of recommendations by participating departments.

Phase 1 - Departmental Management Orientation

A meeting was held with each of the identified department's senior management staff to provide them with an overview of the feasibility study objectives and to solicit their input and support for the project. Management staff agreed to support the study and provided staff members from business, operations and technical functions to assist on the study team by attending the planning meetings and participating in the on-line survey. See Appendix 2 for departmental meeting reports and staff participation.

Phase 2 - Identification of Available Data Streams Within and Outside the County

A joint meeting was held with the identified departments' managerial, technical and operations staff to identify available data streams from their respective departments and to discuss any barriers that might inhibit sharing this information with other entities within or outside the County. Participants discussed:

- What sources of information could be easily harvested without modifying the department's business processes.
- What information sources would provide relevant, timely and authoritative information that could be of value to the efficiency and effectiveness of the departments' and regional entities' operations.

The six (6) representative departments identified 35 sources of data or data streams that met the above criteria. The data streams and staff participation report are listed in Appendix 3.

Phase 3 - Assessment of Usefulness or "Value" of the Identified Data Streams: Survey Results

The information obtained in Phase 2 was used to develop a questionnaire for departments to assess the relative "**value**" of the data streams available within and outside the County, and to indicate the **benefits** of sharing and viewing this information. Appendix 4 includes the web-based Data and Information Sharing Survey and results.

Data and Information Sources for Status Visibility

Table 1 reflects the survey results. Listed are the data streams from each department that were selected as having the most value across each of the County departments.

Table 1
Information Sharing Survey Results
Data Streams of Most Value Across Departments

Department	Data Stream
Public Works	Road Closures/Obstructions (Location, time, severity)
	Consumer/Consumer alert (Activation status, reason, alert)
Fire	HAZMAT Handlers/generators, location, hazard level)
	Incident reporting (Validated type, location, time, etc.)
OEM	Real time earthquake monitoring (Location, magnitude, etc.)
	EMIS (Large scale incident report info from coordinators)
ISD	Network Operation Center (Network status/saturation, location, timeframe, alerts)
	County Building status (Location, status, timeframe, severity, alerts
Public Health	Hospital availability (Location, availability, timeframe)
	Reportable Disease (Type, location, timeframe)
Sheriff	Law Enforcement Alert/Notifications (Type, status, timeframe)
	Incident reporting (Call time, type, location, timeframe, alert)

Priority was given to information that was incident related, the more significant the incident and better verified, the greater the value. If the incident information warranted an alert, this information was also considered to be of benefit to the majority of departments. Some static information was of shared interest, such as HazMat facilities, etc. This type of data can easily be overlaid on dynamic incident maps and provide additional contextual information.

Benefits and Community Value

Table 2 indicates the reported benefits that could be derived from an information and data sharing automated mechanism.

These benefits apply to:

- Public Safety Missions:
  - Provides early warnings
  - Minimizes delay in emergency response
  - Improves life and safety response
- County Departments:
  - Aids analysis and decision making
  - Improves service levels
- General Population and Businesses:
  - Information sharing becomes bi-directional
  - Value to local businesses.

Table 2
Benefits from Day-to-Day Data/Information Sharing
Within and Outside the County

Benefit*	Survey Responses
Aids analysis and decision making	Upon analysis, several incidents may serve as a warning of an impending emergency.
Improves service levels	Allows departments to see status of on-going County activities and leverage this information to improve operational effectiveness and efficiency.
Provides early warnings	Early cyber attack warnings can strengthen network security to prevent intrusions and disruptions.
Improves life and safety response	Information sources outlined may provide information used to direct field crews and employees away from dangerous situations.
Provides value to local businesses	Information could be used to make decisions on whether employees should report to work.

Minimizes delay in emergency response	Status of roadways, waterways, and weather conditions to minimize delays in emergency response or field assistance requests.
Enables bi-directional information sharing	Departments will benefit from emergency business information feedback from local businesses.

*Benefits cited from Question 12, Survey results.

Phase 4 - Development of System Capabilities

System Capabilities

Based on the survey results and meetings with the identified departments, key user features include: data collection as a by-product of normal business operations, by-directional messaging/alerts, no extensive departmental process change, staff work or expense, multiple intake and filtering (security) options, geographic and tabular user selectable display of information. This information was used to develop a high-level functional recommendation matrix to identify key features and functions required for an automated system. See Table 3 below.

Table 3
Implementation Criteria
Issues/Comments and Capabilities

Issues *	Comments*	System Capabilities
Security	Sensitivity, need-to-know basis	-Secure system -Multiple intake and filtering options
Confidentiality	Certain information should not get into the wrong hands	-Role and rule based access levels
Increased value of information	Data becomes important information if the situation warrants	-Automated correlation and viewing of data and incidents. Provides "situational awareness using geographic and tabular displays"
Dispatch is codified -understandable only to internal users	Would require additional effort to make dispatch information meaningful to external entities	-Automated process requiring no extensive departmental process change
Should be an automated system	Should not require constant monitoring	-Automated harvesting of data
Should not add to work load		-Data collection is a by-product of normal business operations
Currently there is no way to easily share information	Must not require a lot of effort at either end	-Bi-directional messaging/alerts

Currently have disparate systems	Issue of compatibility of CAD systems and data transfer protocols	-Interface to multiple systems and data types
Lack of available I/T resources		-No extensive use of department staff or expense
Lack of funding		-Public/private partnership to implement program

*Issues and comments are reported from Question 10, Survey results

The survey suggests that the solution selected must provide controls needed to ensure security and sensitivity of the data. The project cannot add to the workload or impact current processes. The system needs to add value to the data so that it becomes useful information for decision-making purposes. The County has a number of disparate systems and ways of transferring information that must be accomplished electronically as a by-product of normal workflow. The system must be able to interface to a variety of computing environments. Due to funding constraints, implementation and on-going maintenance costs need to be obtained from outside sources, including public/private partnerships.

Business and Technical Capabilities

Staff of the Chief Information Office (CIO) developed the technical capabilities necessary to support the business criteria established by the identified departments and are described in Table 4 below.

Table 4
Business, Functional and Technical Capabilities

Business Criteria	Functional Criteria	Technical Criteria
Operational		
Should minimize impact on department work load	-Data collected as a by-product of normal business operations	XML/SOAP interface
Impact on I/T staff	-No extensive use of department staff or expense	Implemented via a public/private partnership
Confidentiality	-Offer levels of user access	Role and rule based access controls
Increased value of information	-Analysis or automated correlation and viewing of data and incidents. Provides "situational awareness"	Correlation engine
Status visibility	Graphic, geographic and tabular displays	GIS mapping and tabular display capabilities

Dispatch information may have to be enhanced for external use	-No extensive departmental process change	Correlation engine
Technical		
Security	-Secure system -Multiple intake and filtering options	XML/SSL Security
Currently have disparate systems	-Interface to multiple systems and data types	XML/SOAP interface
Should be an automated system	-Automated harvesting of data	XML/SOAP interface
Cultural		
Currently there is no way to easily share information	-Use bi-directional messaging/alerts	Multi device notification (phone, fax, page, cell, etc.)
Incident information released	Procedures and protocols identified for information sharing	Program management/ intermediary services provided
Cost		
Lack of funding	-Public/private partnership to implement program	Private sector funded/County in-kind

County and Non-County Agency Participation

The survey also identified non-County agencies that could provide data to improve the efficiency and effectiveness of services to the region. These county, regional, federal, non-profit and business organizations are reported in Table 5.

Table 5
County and Non- County Participation
To Improve Regional Efficiency and Effectiveness

Agency*	Type of Information
Info Line	211
Coroner	Cause of death, location, time
Dept. of Public and Social Svs.	Status of shelters
County Office of Education	Status of schools, open or closed
Any County Department	Depending on the incident
DHS, U.S. Attorney's Office, FBI, Secret Service	Cyber attack warnings
Caltrans, CHP, Coast Guard	Transportation, airspace restrictions, ocean rescues
NOAH, Cal Tech	Weather, earthquake

Regional Police, Fire	Orange County City of Los Angeles
Regional Dispatch	Verdugo, Long Beach

*Suggested agencies are reported from Question11, Survey results

Cultural concerns

Cultural concerns were identified from several of the departments regarding data privacy and security. Table 6 below summarizes the general comments from the survey regarding security and privacy of shared data.

Table 6
General Comments on Information Sharing

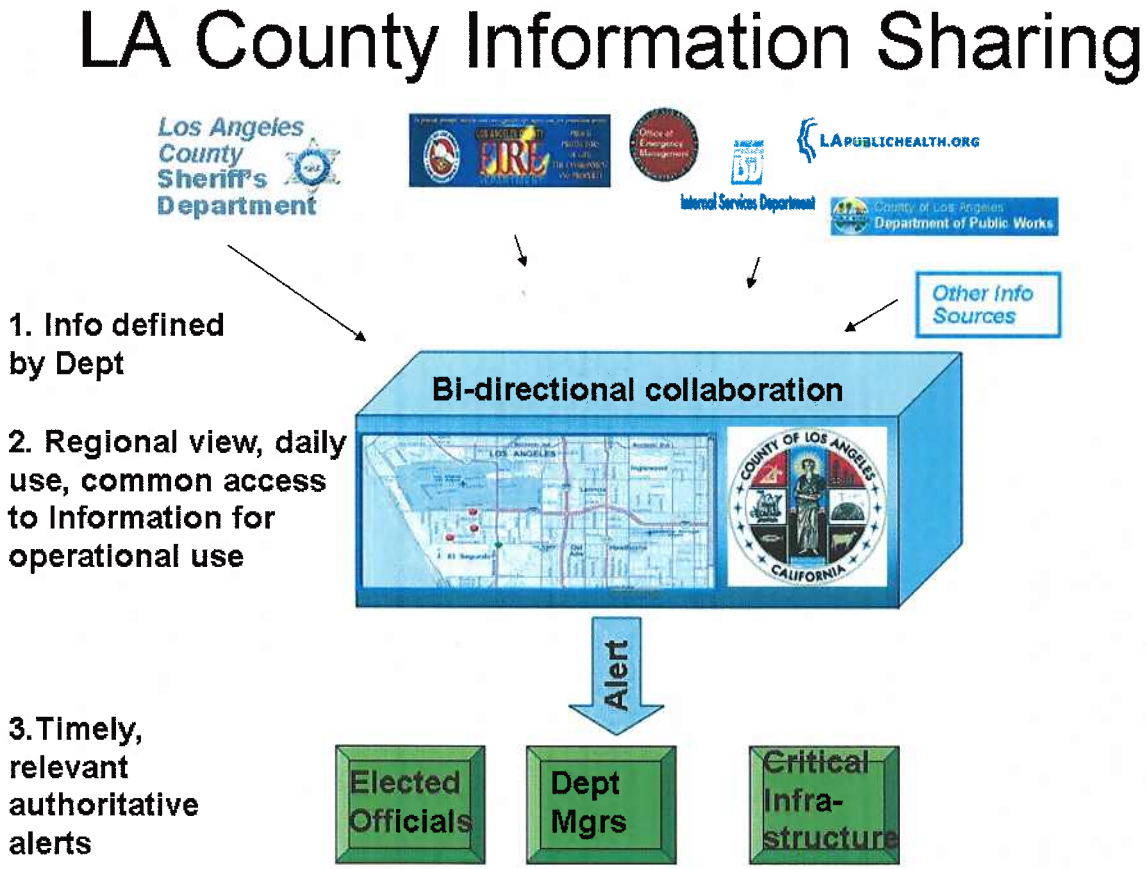
Supportive*	Issues*	Not supportive*
Great idea -- with hopefully not insurmountable technology problems in order to permit sharing. (Public Safety department)	Must require minimal input/action at either end of the system (per infrastructure department).	One infrastructure department anticipates negligible benefit from subject program
The availability of additional data will allow for a more informed decision in an emergency situation (Public Safety department)	Requires analysis, real time systems or people to be of value (per infrastructure department).	
	If cost were associated probably would not be warranted (per infrastructure department).	

*Issues and comments are reported from Question13, Survey results.

Phase 5 - Develop Proposed System Architecture

Functional Description

The broad functional requirements for the County Communications and Information Sharing System are to aggregate incident and related information. The requirements also identify possible correlations between events and trends, make these incidents visible and easily accessible in map and tabular formats and provide a capability to send and receive alert information to elected officials, other executive and governmental operational decision makers and establish the critical infrastructure.



PILOT SYSTEM ASSESSMENT FRAMEWORK

Background: Examples of Information Sharing Programs in Use

There are a number of information sharing programs implemented across the United States. The study reviewed available documentation from representative programs using commercial off-the-shelf (COTS) products, portal and/or notification systems and custom developed systems. The study evaluated Regional Alliances for Infrastructure and Network Security (RAINS) which shares 911 dispatch information with selected subscribers; DMI Services (DMIS) which focuses on sharing information during a major incident; National Center for Crisis and Continuity Coordination (NC4), a service used for information sharing and coordination on a daily basis; Emergency Response Network (ERN) and Joint Regional Information Exchange System (JRIES) which are both focused on sharing law enforcement information; e-Access Roswell/Tele-works (e-Access), a portal/notification system sharing e-government transaction services with citizens and EMIS, the County's Emergency Management Information System. A detailed synopsis of each system is provided in Table 7 below.

Table 7
Automated System Alternatives Summary

RAINS **Regional Alliances for Infrastructure and Network Security**	Regional Alliances for Infrastructure and Network Security (RAINS) is a collection of technologies that extracts 911 information and sends selective notifications to subscribers. The system is active in Portland, OR. The system processes approximately 400 alerts a month. Its interfaces are based on computing standards and notably the Common Alert Protocol. RAINS is a 5013C corporation that charges public and private sector members to join. RAINS was established in August 2003 and is looking for additional communities to serve outside the Portland area.
DMI Services	Sponsored by FEMA and DOD is a computer network that shares data from these services (FEMA and DOD) to and from members of the DMIS network. DMIS requires installation of software and an assigned administrator, but there is no acquisition cost for the software.
NC4 **National Center for Crisis and Continuity Coordination**	NC4 is a daily information sharing and coordination service. In New York, NC4 developed a public/private information-sharing program for the New York City Office of Emergency Management and the business community. The NC4 Activity Center has been used for over a year by the NYC Office of Emergency Management and the 24X7 Watch Command to monitor and track all police, fire, structural, utility, and other incidents. NC4 also aggregates transportation incidents and events information from 17 government agencies in the NYC metro area. Business members of NC4 are able to receive relevant, targeted alerts based on a user maintained profile. NC4's National Incident Monitoring Center also provides a web-based situational awareness capability with integrated views of facilities and incidents overlaid on detailed, street level maps. Departments and elected officials are notified of incidents that may impact the safety and operation of critical facilities and infrastructure.

ERN Emergency Response Network	Dallas-Fort Worth: ERN focuses on law enforcement information and is a local notification system for the Dallas-Fort Worth area. The Dallas FBI office has a group of companies that it notifies with information that they can pass to these member companies. The Dallas ERN network has 1500 members in the area and is funded by the FBI.
JRIES Joint Regional Information Exchange System	On February 4, as part of its Homeland Security Information Network initiative, the U.S. Department of Homeland Security announced the expansion of its computer-based counterterrorism communications system to deliver to states and major urban areas real-time interactive connectivity with the DHS Homeland Security Operations Center through the Joint Regional Information Exchange System (JRIES). Each state and major urban area's Homeland Security Advisor and other points of contact will receive software licenses, technology, and training to participate in the information sharing and situational awareness that JRIES already brings to state and local homeland security personnel across the United States. Examples of other points of participation include State National Guard offices, Emergency Operations Centers, and first responders and Public Safety departments. This does not include the private sector.
e-Access Roswell	Roswell, Georgia: e-Access Roswell is an example of an **e**-government transaction service portal provided by SUNGARD Pentamation and Tele-Works to provide a multi-devise community service portal to connect to several government provided services. The current focus is on offering citizens convenience to services. These types of portal applications have not focused on the information sharing needs within and between government and business regarding security or continuity of business or government.

Assessment Analysis

Based on the analysis of alternative systems using the criteria established in Phase 2, the study team developed an Assessment Matrix for identifying a limited pilot system solution. Table 8 provides an analysis of each representative system based on the criteria identified in the study.

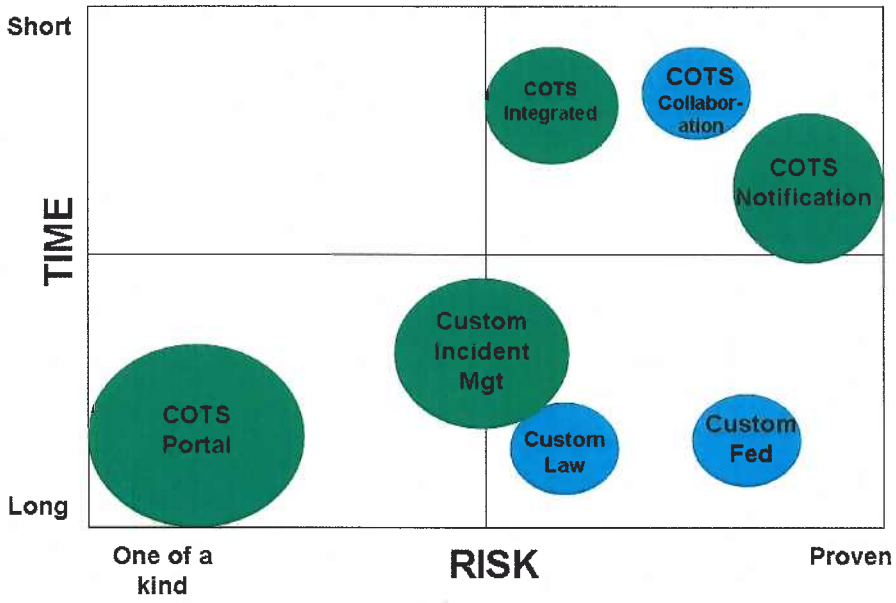
Table 8
Assessment Matrix

Legend:

	Meets Criteria	1 point
M	May Meet Criteria	1/2 point
	Does Not Meet Criteria	0 points

Criteria	Solution Providers						
	Terrorism Custom (JFRIES)	**Law Enf. Custom (ERN)**	**Incident Mgmt. Custom (EMIS)**	**Notifi-cation COTS (SBC/CGI)**	**Business funded, COTS (NC4)**	**Portal COTS (eRoswell/ Teleworks)**	**Integrated COTS (RAINS)**
Risks: Operational	**4.5**	**7**	**6**	**2**	**9**	**5.5**	**9**
Change required to current County processes?	M	N	N	M	N	N	N
Additional staff required?	N	N	N	Y	N	Y	N
Is additional staff required from County IT?	N	N	N	Y	N	Y	N
Is additional equipment required from County IT?	N	N	N	N	N	N	N
System Operational 7x24?	Y	N	N	N	Y	Y	Y
Can system feed EMIS and EOC staff?	N	N	N/A	N	Y	M	Y
Law Enforcement information only?	Y	N	N	Y	N	M	N
Include the private sector	N	Y	N	M	Y	M	Y
All Hazard?	N	Y	Y	Y	Y	Y	Y
Risks: Technical	**5**	**3**	**3**	**1.5**	**6**	**1.5**	**3.5**
Security and access rights defined	Y	Y	Y	M	Y	M	Y
Are there computer integration costs?	N	N	N	Y	N	Y	M
Can notifications be sent by text/email?	Y	N	N	N	Y	Y	N
Can notifications be sent by telephone?	N	Y	N	Y	Y	N	N
Web page display?	Y	N	Y	N	Y	Y	Y
GIS mapping functions?	Y	N	N	N	Y	N	Y
Risks: Cultural	**0**	**2**	**1**	**4.5**	**6**	**3.5**	**6**
Notifications sent to County Leaders	N	Y	N	Y	Y	M	Y
Notification sent to business Leaders	N	Y	N	M	Y	M	Y
Messages sent by County Departments?	N	N	N	Y	Y	M	Y
Do departments initiate the notifications?	N	N	N	Y	Y	M	Y
Can department's information be filtered?	N	N	Y	Y	Y	Y	Y
Encrypted data transmission to web page?	N	N/A	N	N/A	Y	M	Y
Intermediary service for info sharing protocols	N	Y	N	N	Y	E	Y
Costs	2	2	0	0	2	0	0
Computer Systems cost to County?	N	N	Y	Y	N	Y	Y
Federal Funded	Y	Y	N	N	N	N	N
Business Funded	N	N	N	N	Y	N	N
TOTAL CRITERIA MET	**11.5**	**15**	**10**	**6**	**24**	**10.5**	**18.5**

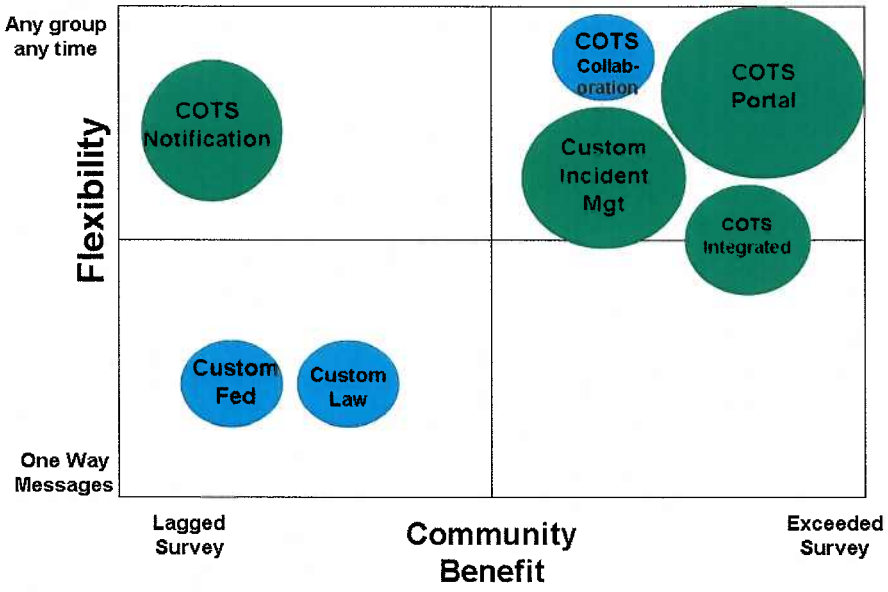
Table 9
System Type by
Operational Risk vs. Implementation Time and Cost Analysis



Analysis

The green circles reflected in the graph above indicate that funding is required; the blue circles signify that funding may be achieved by either Federal or private sector sources. The circle size indicates the rough degree of costs required. The chart above illustrates that the most widely used approaches have less risk. The options that are commercially off-the-shelf (COTS) are the quickest to implement. COTS notification systems are readily available and in use in a number of locations which make it an attractive option from a risk to implementation perspective. The challenge is that the community benefit of an aggregated view of incidents that is visible through shared access is not met with a notification-only approach.

Table 10
System Type by
Messaging Flexibility vs. Community Benefit and Cost



Analysis

A COTS portal could be built to County specification, but this effort involves time and expense since the tools would have to be customized for this information sharing application. Two of the three externally funded approaches, in this case federally funded, are primarily designed for FBI or other law enforcement organizations to alert designated subscribers. These approaches have similar drawbacks as stand-alone notification systems in terms of County functionality.

Conclusion

The one option that is in the desired quadrant, top right, in both analysis diagrams is the COTS collaboration approach. This approach exceeds survey benefits, provides the needed flexibility/functionality, and mitigates costs and time to market through proven use and public/private partnership funding models. The selected approach overshadows a COTS notification approach, since the criteria identified in the County department survey were the ability to aggregate alerts, see possible correlation of events and trends, make these incidents visible and easily accessible in map and tabular formats, and have the ability to send and receive alert information that may improve public safety and service levels across multiple departments. Accordingly, it is important that the selected approach allow for providing status, viewing and communicating in many patterns. A one-way communication tool such as a notification system would address only part of the issues at hand.

The COTS collaboration approach that was rated the highest, based on a review of existing functionality compared to required capabilities, is a joint NC4 and SBC/CIG effort. This collaborative solution is also the least expensive, most flexible, shortest to implement and lowest risk than any of the other strategies.

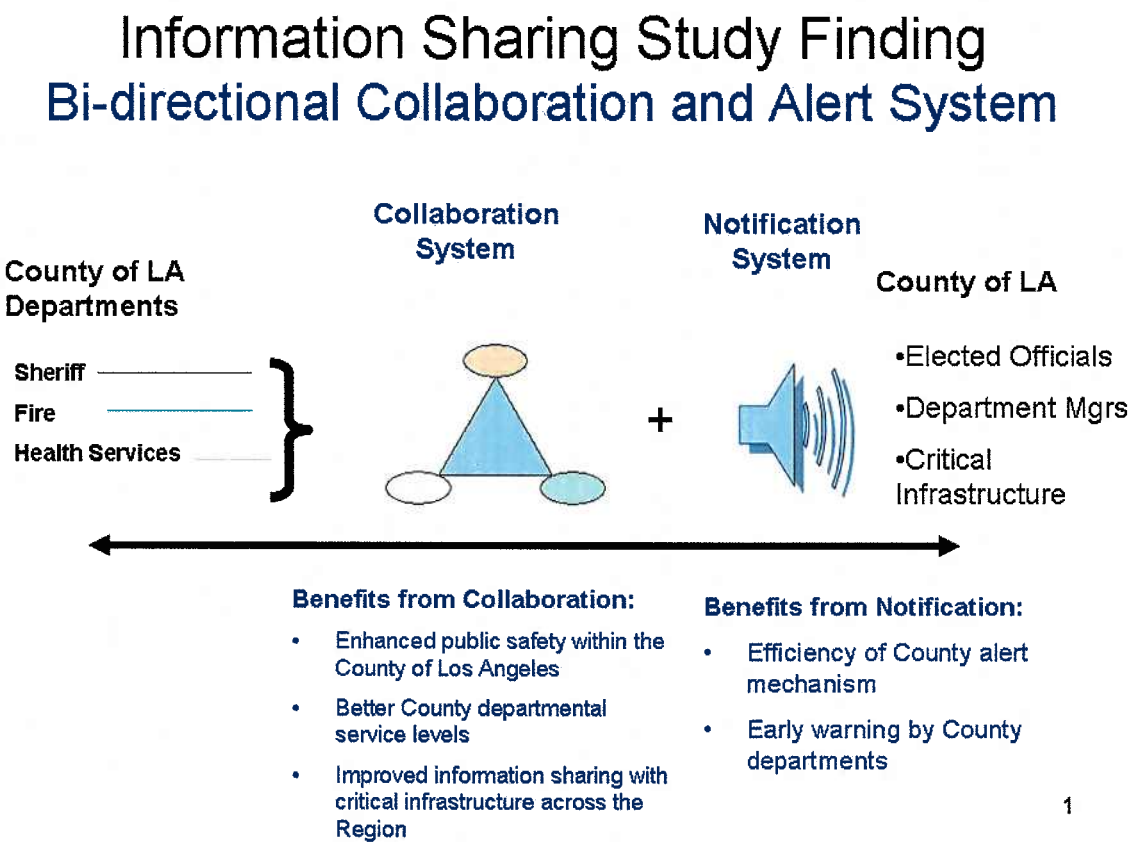
Cost Analysis

Cost was a significant factor identified in all of the departmental discussions and analysis of the survey results. None of the participating departments have discretionary funds to support the implementation and on-going costs of this project. Ideally, the County could acquire outside funding through external grants. However, most of these grants are related to Homeland Defense and would have to be 1) terrorism-centric and 2) County benefit-centric. The recommended option is a business-funded model that has the concomitant criteria to share information that business would deem important. A public private/partnership to be contractually developed could cover sustaining operating costs provided the County agrees to share sufficient information with the private sector, resulting in increased readiness within LA County. This office has informally confirmed interest in the system by the private sector. Two large businesses in the Los Angeles area have confirmed their interest in potentially subscribing to a system that presents non-sensitive public domain information in map and tabular form.

RECOMMENDATIONS

The systems reviewed by this office were commercially off-the-shelf, custom solutions, portals, notification, and incident management and collaboration systems. The goal was to identify the solution or solution combination that best meets the criteria developed in this study and provide the benefits to the community of an aggregated view of incidents that is visible through shared access and provides early warning via alert notification.

Based on the criteria, this office determined that a combination of a commercial-off-the shelf (COTS) data fusion, visualization and analysis software solution and a notification system appears to best meet the criteria identified in the County department survey. Used together, this strategy will enable the aggregation of incident and related information to provide a countywide situational awareness, identify possible correlation of events and trends, and make these incidents visible and easily accessible in map and tabular formats. This strategy will also provide the capability to send and receive alert information that may improve public safety and service levels across multiple departments.



Benefits

This study found that enhanced public safety, improved service levels, value to business and visibility of the status of the region's critical infrastructure are all benefits from better information sharing. This finding was identified from examples given by the departments during the initial interviews and corroborated with quantitative data obtained from the multi-departmental survey.

This study also found that the County would benefit from better information sharing, status visibility and notification among County departments. Timely, relevant, authoritative and valuable daily information displayed on a map or tabular format was found to aid decision making, improve service levels, benefit public safety by providing early warning, help to minimize delay in and improve emergency response and provide community value via bi-directional alert notification with the business community and general population.

Proof-of-Concept Pilot

Some concerns were raised by participating departments regarding the ability of an automated system to provide security and confidentiality of information shared between agencies without staff intervention and monitoring. While this office believes that the technology solution recommended for this system can provide user definable filtering and access controls to secure data access, a proposed six-month proof-of-concept pilot will demonstrate that the operational, technical and cultural concerns expressed by these agencies will be resolved before a full system implementation is undertaken. The pilot will also develop applicable policies, protocols and procedures for implementation of a full-scale information sharing environment that will allow County participants to view local information on a secured website. Participants will also be able to create a notification profile that will enable users to selectively receive alerts on multiple devices. This website would also be available to the Board of Supervisors and other individuals that require relevant information. Appropriate information could also be identified for eventual distribution to the private sector on a subscription basis.

Estimated Start Up and Sustaining Costs

Based on the system selection criteria and analysis, NC4 and SBC are the most qualified vendors who can uniquely provide an off-the-shelf pilot Communications and Information Sharing System for a six-month proof-of-concept pilot. During the six-month pilot, licensed use of the systems would be provided at no cost to the County and $25,000 would be identified for one-time, out-of-pocket costs for customization and development of pilot department system interfaces. A Statement of Work (SOW) will be developed to define the scope of work and services provided by the system's providers and selected County departments. Fire, Sheriff and ISD have agreed to participate in this limited pilot project.

Based on the results of the six-month pilot, a potential public/private partnership would be constructed whereby sustained operational funding will need to be provided on a subscription basis from private provider(s). The County would share "non-sensitive" information on an in-kind basis with the private sector. This option would provide on-going

information sharing with County departments at no cost and increase the readiness of the public and private sector partners within Los Angeles County.

CONCLUSION

This feasibility report findings indicate that the County would benefit from increased information sharing, status visibility and notification among County departments. This report also finds that a combination of solutions provided by commercial off-the-shelf collaboration and notification vendors best meets the needs of daily incident monitoring, information sharing and alert notification. This office will move forward to further test the feasibility of implementing the Communications and Information Sharing System by implementing a six-month pilot to share identified sources of daily use information among a subset of departments. Established criteria will assess the personnel, processes and technology costs and associated County benefits and a strategy for moving forward with a full scale implementation upon the successful completion of the pilot program,

APPENDICES

1. January 20, 2004 Board of Supervisors' Motion
2. Department Orientation Meeting Reports
3. Identification of Data Streams, Planning Meeting Report, and Planning Meeting Participants
4. Survey

Appendix 1

January 20, 2004
Board of Supervisors' Motion

Chief Administrative Officer
Chief Information Officer

At its meeting held January 20, 2004, the Board took the following action:

Supervisor Knabe made the following statement:

> "The ability to communicate the myriad of threats and other impacting events from multiple sources (i.e., cities, law enforcement agencies, fire agencies, Federal agencies, State agencies, utilities, transportation/port/airport authorities, etc.) effecting and impacting businesses and the general population of the Los Angeles region necessitates that we reevaluate how we gather and make information available to ensure public and business awareness. Improving communications and providing a more open degree of access will allow the development of strategies for minimizing the impact of local and National events on businesses and other interested organizations. Several municipalities, including the City of New York, have implemented technology-based event tracking and status systems to reflect events from multiple sources within their respective regions. This has proved to be advantageous to the citizens, schools, government organizations, and local businesses in allowing a common portal into current security or other impacting events and their status.
>
> "The County of Los Angeles has demonstrated a high degree of responsiveness to past natural disasters and in collaborating with other municipalities in responding to National threats under the guise of Homeland Security. While each County organization has systems for capturing event information and providing status, the majority of these systems are independent and do not readily share information in a collaborative fashion. It is necessary that our Emergency Response organizations enhance information sharing and provide improved public and local business accessibility."

Jon Fullinwider, Chief Information Officer, addressed the Board.

After discussion, Supervisor Knabe made a motion that the Board instruct the Chief Information Officer to:

1. Coordinate with the Chief Administrative Officer's Office of Emergency Management, the Sheriff, Fire Chief, Interim Director of Internal Services, Director of Public Works and other departments as required, to assess the Candle Corporation NC4 system as a solution for improving regional communications and status visibility into numerous national and local events effecting the general population and businesses located within the Los Angeles County region; and

2. Report back to the Board within 90 days with a report delineating the benefits, community value, implementation criterion, requirements for non-County department participation, projected time frame for a phased implementation, estimated startup and sustaining operating costs and requirements that would need to be addressed in developing a contract with the Candle Corporation in entering into a public/private partnership.

Supervisor Yaroslavsky made a suggestion that recommendations one and two of Supervisor Knabe's motion be amended to read as follows:

1. Coordinate with the Chief Administrative Officer's Office of Emergency Management, the Sheriff, Fire Chief, Interim Director of Internal Services, Director of Public Works and other departments as required, to assess the Candle Corporation NC4 system or any other applicable system as a solution for improving regional communications and status visibility into numerous national and local events effecting the general population and businesses located within the Los Angeles County region; and

2. Report back to the Board within 90 days with a report delineating the benefits, community value, implementation criterion, requirements for non-County department participation, projected time frame for a phased implementation, estimated startup and sustaining operating costs and requirements that would need to be addressed in developing a contract with the Candle Corporation or any other company in entering into a public/private partnership.

Supervisor Knabe accepted Supervisor Yaroslavsky's amendment.

Supervisor Knabe's motion, as amended, seconded by Supervisor Yaroslavsky, was unanimously carried.

8012004-3
Copies distributed:
Each Supervisor
Sheriff
County Counsel
Director of Public Works
Fire Chief
Interim Director of Internal Services
Administrator, Office of Emergency Management

Appendix 2

Department Orientation Meeting Reports

Los Angeles County Information and Communication Project
Executive Briefing and Fact Gathering
Meeting with Department of Public Works (DPW)
February 17, 2004
Meeting Notes

The meeting with Los Angeles County Department of Public Works was held on February 17th from 9:00 a.m. to 10:00 a.m. at 900 Fremont Ave, Alhambra.

Attendees:
Attendees from DPW included Diane Lee, CIO; Frank Cheng, Division Chief, Information Technology Division; Gary Hartley, Disaster Recovery, Steve Dunn, Disaster Recovery and liaison to the EOC.

John McIntire, Associate CIO, County of Los Angeles and Deborah Kelfer, NC4 Consultant.

Meeting Notes:
John McIntire kicked off the meeting with introductions and an agenda which covered the goals and objectives for this meeting. He stated the goal of this meeting was to orient department management to this motion, get their input, and view the business need and support, if appropriate.

Deborah Kelfer gave a background on the motion and similar work being done by NC4 in NYC and the City of LA.

Diane Lee commenced the meeting by commenting on the need for interoperable communication via radio between fire services and law enforcement. This type of project was under discussion in a number of avenues outside of the current motion.

A discussion ensued about the effective use of systems in the Department of Public Works and the fact that procedures are in place to notify affected departments, typically by one-to-one phone calls.

The dispatch system was noted as a possible source of automated information that could be tapped into for this information sharing project. Frank Cheng took the action item to look at the structure of the data field to assess whether high priority items could be easily flagged and harvested. If so, he noted that the department would then have to assess required resources and time issue to harvest this information.

John McIntire reiterated that this feasibility study is focused on harvesting information as a by-product of an existing information stream. He suggested that the data will provide a dashboard view of information across the county and enable trends to be identified that alone as a data point may not suggest an important event. However, in combination with other data points, a picture may surface of actionable information needed for decision making purposes.

Diane Lee confirmed her understanding that this is not a new system but rather a by-product of existing systems. She also noted that she could readily see that the L.A. County Board of Supervisors could benefit from an aggregated view of what is occurring in their district.

A discussion ensued about the importance of authenticated, reliable real time information. The group used the example of the report by the media that people should boil their water before drinking it. When in fact during that particular event; there was not a water pollution problem that required boiling drinking water. The group concurred that there should be an automated method for disseminating authenticated real time information to County departments and eventually to private businesses and the public to enhance decision making.

The group acknowledged that although the DPW's systems are very effective, there is room to augment their current systems and processes.

Diane Lee agreed to support the feasibility study and will send two DPW representatives to the working meeting scheduled at 2:00 p.m. on February 25, 2004.

Los Angeles County Information and Communication Project
Executive Briefing and Fact Gathering
Meeting with LA County Fire Department
February 20, 2004
Meeting Notes

The meeting with Los Angeles County Fire Department was held on February 20 from 11:00 a.m. to 12:00 noon at the LA County Headquarters, 1320 N. Eastern Avenue.

Attendees:
Attendees from the Fire Department included Gary Lockhart, Chief Deputy; Janette Parker, IS Division Chief and Michael Dyer, Deputy Chief of Special Operations Bureau.

John McIntire, County of Los Angeles, and Deborah Kelfer and Jeff Covert, NC4 Consultants.

Meeting notes:
John McIntire kicked off the meeting with introductions and an agenda which covered the goals and objectives for this meeting. He stated the goal of this meeting was to orient department management to this motion, get their input, and view the business need and support, if appropriate.

Deborah Kelfer provided background on the motion and Jeff Covert talked about similar work being done by NC4 in NYC. He also provided a brief summary of discussions thus far with LAPD, LAFD and L.A. City's DOT regarding enhancing the information and notification processes within these key organizations that may be used to provide a subset of pertinent information for distribution to other departments and users.

Chief Lockhart led the meeting by commenting on his views related to the need for better information sharing. For example, there are a number of resources around the county that departments may not be aware of and may be useful and provide business benefit during an operation. Furthermore, this type of mechanism could be used region wide, to poll other agencies for such resources as helicopters and other critical resources. A clearer aggregated view of the County would be of benefit to the County's trauma centers which can be severely affected by multiple incidents. The business benefit from multi-department information sharing was very apparent to the Los Angeles County Fire Department executives.

There was a discussion about the need for a county and region wide approach since our natural and manmade disasters do not acknowledge jurisdictional boundaries.

Janette Parker noted that the dispatch center would be an important source of day-to-day timely and authoritative information. Events are tagged for severity or importance and located by an address. Chief Dyer noted that this was an important factor because

displaying information in a map view is consistent with the way Fire Services uses their information and job performance. It will also provide a quick dashboard view of events in an area.

John McIntire reconfirmed that the goal of this motion is to identify streams of information that may be surfaced and made visual as a by-product of current operations.

Chief Lockhart agreed to support this feasibility study and will assign two Fire Services representatives to attend the next meeting scheduled on February 25, 2004. John McIntire suggested considering personnel from both the I/T and operational sections of Fire Services.

The February 25th meeting will focus on identifying current information streams produced in each of the five (5) departments noted in the January 20, 2004 Supervisory Motion: Sheriff, Fire, DPW, ISD and OES. The group will then identify the business or operation benefit to sharing that information, assess the impact on service level improvement to departments and the community and identify potential technical, cultural and policy feasibility issues.

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Los Angeles County Information and Communication Project
Executive Briefing and Fact Gathering
Meeting with Internal Services Division (ISD)
February 12, 2004
Meeting Notes

The meeting with ISD was held on February 12, 2004 from 7:30 a.m. to 8:30 a.m. at 9150 East Imperial Blvd, Downey.

Attendees:
Attendees from ISD included Mark Gascoigne, General Manager, Information Technology Service, and Robert Gillis, Manager.

John McIntire, Associate CIO, County of Los Angeles and Deborah Kelfer, NC4 Consultant.

Meeting notes:
John McIntire kicked off the meeting with introductions and an agenda which covered the goals and objectives for this meeting. The objective was to brief the key ISD executive on the background and goals of this Board Motion and to gain high level support of this project. We informed the Interim Director that the goal of the 90-day study was to assess the feasibility, benefits, and policy and practice concerns of implementation of such an information sharing program across County departments. The departments mentioned in the Board Motion were ISD, Fire Services, Sheriff, and Public Works.

After a brief overview of the Motion, NC4 technology and other technologies that might enable interdepartmental information sharing, the first task involved a discussion of possible sources of information that ISD might offer to the County community.

One of the first questions that came up was how this project differed from the County's EMIS system, used when the activation level is raised for the County's EOC.

- This project differs in that it focuses on day-to-day events that may be precursors to a larger event.
- The goal is to review in aggregate these pre-incident events to mitigate their impact to the County and the community.
- In effect, this project aggregates information on a day-to-day basis, can supply EMIS or other systems with this collected information and is an adjunct to the work of EMIS, a system used when there is an EOC activation.
- Each department would make their own decision about what fields in the data stream could be made available outside their departments. This process would be done automatically based on field types.
- Information collected would be a product of the current information flow from the departments and not an incremental task.

ISD pointed out several potential sources of electronic information that could be tapped into, without impacting the day-to-day operation of that application.

Sources of Information:

"Famous" facility status

ISD would like to have updated information about:

- Energy Management (SCE) since it affects their network availability
- Telecom Status

A discussion ensued about the benefit of shared information. The consensus was that having access to relevant information has its major benefit in better decision making and faster notification of impacted personnel. "If we only knew we could have done something about that event".

Dan pointed out that it would be desirable to have a way, in going forward, to have a person in the middle of this aggregation mechanism to collect, evaluate and correlate information. A discussion ensued about a policy issue pertaining to having a person at a DOC or in another departmental position take on these tasks as part of his day-to-day operational responsibilities.

It was suggested that these issues be discussed with John Sullivan, Sheriff's Terrorism Early Warning Group, since they have a need for and perform information synthesis and analysis.

Mark Gascgoine said that his team would find a way to participate on this project.

The meeting adjourned at 8:30 a.m.

Los Angeles County Information and Communication Project
Executive Briefing and Fact Gathering
Meeting with LA County Sheriff's Department
And Office of Emergency Services (OES)
February 20, 2004
Meeting Notes

The Meeting with Los Angeles County Sheriff Department and OES was held on February 20, 2004 from 10:00 a.m. to 11:00 a.m. at the LA County Emergency Operations Center, 1275 N. Eastern Ave.

Attendees:
Attendees from the Sheriff's Department included Commander Betkey, Sergeant John Hargraves, Lieutenant Jeff Donnahue and Sergeant Ortega both from Communications and Fleet Management.

Attendees from Emergency Operations included Robert Garrott, Robert Sawyer, EMIS team Manager.

John McIntire, County of Los Angeles, Deborah Kelfer and Jeff Covert, NC4 consultants.

Meeting notes:
John McIntire kicked off the meeting with introductions and an agenda which covered the goals and objectives for this meeting. He stated the goal of this meeting was to orient department management to this motion, get their input, and view the business need and support, if appropriate. This meeting was different from the others in that both the Sheriff's Department and the Office of Emergency Management were participating together. John briefed them on the meetings previously held with ISD and DPW.

Deborah Kelfer provided background on the motion and Jeff Covert talked about similar work being done by NC4 in NYC and discussions thus far with LAPD, LAFD and City of LA's DOT regarding enhancing the information and notification processes within these key organizations and then providing a subset of that information to other department and users.

Commander Betkey led the meeting noting that as part of his work with the Homeland Security Division, the goal of this motion was consistent with other work to gather information across multiple sources and garner intelligence in doing so. As part of prevention and preparedness, it is important to have information across many departments, SWAT Teams and bureaus to detect patterns and respond to new events. Commander Betkey clarified the point that this was a feasibility study only, and there were no requests for budget funding associated with this action. John McIntire commented that his request to the Sheriff's Department and OES was for designation of two (2) representatives, one from I/T and the other from the operations side, to assist in this effort

by attending the working group meeting scheduled on February 25, 2004, completing a web survey and responding to several drafts of the feasibility document.

A discussion ensued about the possibility of looking at the dispatch systems and collecting information from it as a by-product of the normal day-to-day operation of the dispatch function. The notion was to look at existing data and when presented with other related information, an important pattern or trend may be detected. Sergeant Hargraves, TEW, noted that TEW would be very interested in another source of timely authenticated information to incorporate into their intelligence-gathering efforts.

A comment was made that the five (5) departments included in this feasibility study indeed produce much of the system information in the County, and that a number of other departments are less fortunate and do not have clear processes to access this information on a day-to-day basis. Departments in this category include the Coroner's Office and Public Health. One of the benefits of aggregating information and surfacing important events would be to make this information available in an easily displayed format to many departments and potentially cities across the county. A discussion followed about the importance of map views in bringing data together as information.

The group engaged in a discussion about the technology behind these systems and the feasibility of integrating or tapping into information from different sources. There was an accompanying discussion of privacy, security and accessibility issues. Commander Betkey and Robert Garrott suggested that these points might be best handled in the feasibility section of the report. The scope of this project was to determine the benefits to the County and the feasibility of carrying out such an information sharing project and finally reporting the findings back to the Board of Supervisors.

Commander Betkey was interested in looking at the existing data across departments and making an assessment if this information may be of value to the Sheriff's Department or others to enhance service levels delivered across the County. He agreed to move forward to the next step and will send two (2) representatives from the Sheriff's Department, probably from Dispatch, to the next meeting. Bob Garrott also agreed to send two representatives to the meeting on February 25, 2004 to look at how information can be acquired and used on a day-to-day basis so that we can glean that intelligence and early insight into an event that might be helpful to making timely decisions and thereby mitigate the impact of an incident.

The meeting adjourned at 10:50 a.m. with a goal to assess opportunities to surface timely, authoritative information that can be helpful across departments for intelligence gathering and decision making purposes.

Appendix 3

Identification of Data Streams, Planning Meeting Report and Meeting Participants

Identified Data Streams by Department

Department	Available Data Stream	Description	Comments
Sheriff	CAD	PSAT, SPR (special problem reporting)	Centralized system:
	Alert Notification System	Community alert network	Dialogic system
	Emergency alert Network	Radio test of Emergency alert network	radio
	LARSIS	Unified Crime Reporting	paperless: may be model for state
	Fusion	Look at aggrgated codes, patterns	distributed by right to know- Filter A; Confidential, Filter B: Not confirmed, C: Confirmed and Distributable
	Crime analysis	Look at Baseline	redeploy resources if above baseline
	Crisis	Narrative: Survey of major events	
Fire Services	CAD	Incidents: Who what where when, why	Issue: Do you wait for inf to be validated before sending it out -hazardous material description and the incident
	Hazmet	Handler and hazmet sites	
	NFIRS	Validated Information	
	EMS	Validated Information	Injury types, trauma runs
	CUBE		
	Water Rescue		
Public Health	VCMR	Vital census mgt record	Similar to a CAD System
	HAZEN	Notification to health professionals and CDC, BOLF	
	Hospital Admissions	Treatment and d Diagnosis	
	Readinet	Hospital availability	Share infor with Fire and Coroner
CA/ OEM	EMIS	Emergency Mgt info system	uses GIS info
		Standardized reporting	Provides Status reports
			Manually prepared incident reports
	Automated phone dialing	to 88 cities and EOC coordinators if activation required	
	CUBE	OES is lead Contractor for Earthquake Inf via pager	Sheriff is sub for this CUBE info
ISD	Call in Help Desk	Network Operating Center (NOC)	Provides status of health of the network
	Dispatch		Interested in volum ean dpattern of calls
	611	Telephone service	
	Building status	Building status	Power , HVAC
DPW	Road Closures	Road Maintenance	Fire usually gets this from CAL trans
	Dispatch	For rock slides, flooded intersections	Corelation engine may be needed to spot trends across dispatch systems
	Rain Gauge		
	Water Velocity Gauge		
	Satellite weather		
	Height of water at the flood channels		
	Dam level and release data	Roads	static information
	Construction projects		
	Traffic flow	Project tbd 5 -10 years +	
	Consumer alert system	radio network alert	

Los Angeles County Information and Communication Project
Planning Meeting
Convened with County of Los Angeles Chief Information Office (CIO) and five LA County Departments
February 25, 2004
Meeting Notes

The Meeting with Los Angeles County Sheriff Department, Fire Services, OEM, Public Health, and Internal Services Departments was held on February 20, 2004 from 2:00 p.m. to 3:30 p.m. at the LA County Hall of Administration, Room 383. Mike Gin, Fourth District I/T Deputy to Supervisor Knabe, kicked off the meeting. John McIntire, Associate CIO, County of Los Angeles convened and facilitated the meeting. Deborah Kelfer, Ph.D., served as consultant on multi-organizational communication for this feasibility study.

Attendees:
The Planning meeting attendees are listed in the attached spread sheet.

Meeting notes:
John McIntire kicked off the meeting with introductions and an agenda which covered the goals and objectives for this meeting. He then turned the meeting over to Mike Gin who commented on the perceived need by the Board to better share daily information across departments. The goal is to garner pre-incident or intelligence information on an ongoing basis and, from a countywide view, use this information to improve service levels and potentially mitigate the impact of threats from man-made and natural events.

John McIntire then asked the planning team to identify streams of information in each of the departments. The goal was to have a better understanding of what data was available and to point to ways in which departments might improve service levels if they had access to that timely information.

John McIntire commented that the goal of this feasibility study was to find ways to tap into current information streams, not to build a new system. Rather create a display or dashboard of daily events that could be viewed in the aggregate enabling departments to cull out pre-incidents that surface when viewed in context via a map interface. Furthermore, with this pre-incident information, departments could make faster decisions regarding first responder response options. For example, Public Health may raise an advisory about an infectious agent that may be water borne, resulting in important information for Fire Service's first responders and Public Works personnel.

The summary of data streams from each of the five departments follows.

Detailed Summary from Each Department's Presentation and Associated Dialog

Fire Services

Fire has a CAD system which shows time, location, resources, type, paramedics' response and air rescue information. An issues raised was whether there is a requirement for this project for validated information only. CAD information is "as reported". An important point was the ability to see the pattern of evolving incidents across departments to see if a trend was developing. TEW or others may need to analyze this concurrently displayed information. Call volumes may also serve as lead indicators. A discussion followed on: the idea of establishing business rules to automatically select incidents based on type, what information would be shared and with whom.

Fire Services also talked about their NFIRS system which reports validated information about an incident.

The EMS system tracks injury type and trauma runs. The Redinet System carries information about hospitals intake of certain types of trauma cases.

Fire Services also has information about chemical handlers and hazmat sites. There is a link to CAL TECH who reports out any earthquakes above 3.5 as an alarm.

Public Works

Public Works has a CAD and dispatch system. Public Works has links to a number of different weather agency web sites. Public Works has gauges for rain and gauges for velocity of water. Fire commented that this information would be helpful since they may need to respond to a call for help. If gauges were mapped and reported out at the time the rescue team was dispatched, they could put needed rescue strategies in place as soon as the call was placed. There is cooperation among the team to understand dam, flood control, water levels and flow and automated alarms. There is a need for electronic maps of dams with situation and run off information.

Public Works provides maintenance management for streets and stop lights. They are working on a traffic management system that will be available in five to ten years. It will work with the MTA, ITS and CALtrans to improve street traffic flow. Public Works also provides static information about construction and road projects.

A discussion followed about the need for a person and a "correlation" engine to spot trends in the data.

Internal Services Division

ISD has a dispatch system. Of interest is the volume and pattern of calls. ISD runs the call in system with a Help Desk and Network Control Center. Of interest was being warned in advance of countywide network problems that could affect systems, buildings or areas. ISD also runs the 611 telephone repair system. ISD tracks building systems, including information about HVAC and power. Others departments may need this information as it responds to events around these facilities.

Sheriff Department

The Sheriff Department uses a CAD system which is a centralized single system across the County. Incidents are reported as call types. The Sheriff's office also has an emergency alert system that goes out via radio, a Community Alert Network which uses a Dialogic system and updates the Fire Duty Chief as well. The Sheriff's Department has access to CUBE which reports earthquake information, using pager technology, the report has a 2-3 minute delay. Sheriff has radio interoperability with CHP. The Sheriffs Department uses EMIS when the EOC raises the EOC activation level. The Sheriff's Department also uses a Fusion system, which looks at aggregated dispatch codes, patterns and reports these out on right-to-know basis. For example Filter A: Confidential, Filter B; not confirmed and Filter C: confirmed and distributable.

The Sheriff Departments uses PSAT at Dispatch, and SPR- Special problem reporting. The Sheriff's Department also uses LARSIS which is a unified crime reporting system whose goal is to connect systems, reduce time and paperwork and serve as a model for the State. The Sheriff's Department is also using GIS and mapping tools for regional allocation and control based on the concentration and pattern of incidents. The Sheriff's Crime Analysis work enables the Department to establish a baseline for incidents and redeploy resources if incidents exceed baseline.

OEM

The OEM and the EOC use the EMIS system when the activation level of the EOC changes. EMIS provides for standardized reporting and includes status reports and incident reports. All are after the fact. Input to EMIS is from many of the County departments and city liaisons. Output from EMIS is also forwarded to the state OES. Typically, EMIS is used when the EOC is activated during a significant event. On occasion, the EOC will also be activated as the County prepares for a major event/celebration.

The OEM also has an automated phone dialing system to the 88 cities of the County and to the EOC coordinators should an event occur. OEM is the lead contractor for Cube Multidimensional which makes earthquake information available to other departments via pager.

There was a discussion about the goals of this project which is to share information about the seemingly routine events that take place across departments and county region. These daily events may be pre-cursors to a larger event and, by having a shared view steps can be taken to mitigate the impact of a potentially larger problem. Thus, this data sharing and

communications project may be viewed as an adjunct to EMIS. EMIS is currently used during major events, while this project explores the feasibility of information sharing about day-to-day precursor incident information.

Public Health

The Department of Health Services uses VCMR (Visual Confidential Morbidity Report) which is similar to a CAD system. The County is getting feeds from laboratories, Kaiser and other hospitals.

HASTEN is a health alert network, similar to a dialogic system. It uses voice over IP. Public Health uses e-mail to get information to TEW, reports to and from the Coroner on unusual deaths and is working with OEM to feed information to them. Public Health is working on an air sensor network and over the next three months will be getting messages from these air sensors.

Summary

Most departments are using CAD type systems in which pre-defined information could be identified, harvested and shared as appropriate among departments. Issues raised were the ease of accomplishing this task, the need for this effort to be a by-product of current systems, and the aggregate serving as a value added to current processes. There appears to be a common need and associated benefit shared among the departments for visibility regarding patterns in background information which when is acted upon by an alert and notification system to appropriate executives and operational teams.

A general dialog ensued about the need for a community alert network. Once information is shared among departments, if this information is available in an electronic form, it could be vetted and pushed out to citizens and businesses. A discussion also followed about possible funding opportunities for automating access to information for bio-terrorism work.

Next Steps

John McIntire asked the departments if they wanted to move to the next step which is a web-based survey of departmental data stream and related issues. Each of the five (5) departments attending the planning meeting agreed to move to the next set of steps in this feasibility project. The survey will address what information each department may want from another department (data steam list attached); the issues in accessing current data streams; barriers and their vision of how this information sharing mechanism might be implemented.

Planning Meeting Attendees

Interdepartmental Information & Communications Project Attendees						
Name	Title	Plan'g Mtg	Phone	Fax	Email	Department
McIntire, John	Associate CIO	yes	(213) 974-2154	(213) 974-4732	jmcintre@cio.la.ca.us	Chief Information Office
Baker, Howard	Associate CIO	yes	(213) 974-1772	(213) 633-4732	hbaker@cio.co.la.ca.us	Chief Information Office, County of LA
Cardenas, David		yes	(213) 989-7212	(213) 482-4856	dcardenas@dhs.co.la.ca.us	DHS
Strassburg, Marc		yes	(213) 240-7785	(213) 250-2594	mstrassburg@ladhs.org	DHS
Gin, Mike	Deputy	yes	(310) 519-6021	(310) 732-7927	mgin@bos.co.la.ca.us	Don Knabe Supervisor, Fourth District
Roa, Stacey		yes			sroa@bos.co.la.ca.us	Don Knabe Supervisor, Fourth District
Garrott, Bob	Manager	yes	(323) 980-2269	(323) 881-6897	rgarrott@lacoeoc.org	EOC
Parker, Janette	CIO	yes	(323) 890-4147	(323) 887-3704	jparker@lacofd.org	Fire Services
VandenBerg, Jerry		yes	(323) 881-6139	(323) 266-6925	jvandenb@lacofd.org	Fire Services
Ortiz, Celina		yes	(323) 267-3558	(323) 780-0110	ceortiz@co.la.ca.us	ISD
Gillis, Bob	Manager	yes	(323) 267-3159	(323) 263-5286	rgillis@isd.co.la.ca.us	ISD-Wide Support Div Admin & Finance
Cheng, Frank	Associate CIO	yes	(626) 458-4107	(626) 457-1842	frcheng@ladpw.org	Public Works
Dunn, Steve		yes	(626) 458-7313		sdunn@ladpw.org	Public Works
Vander, Art		yes	(626) 458-7987	(626) 457-1842	avander@ladpw.org	Public Works
Hargraves, John	Sergeant	yes	(323) 980-2287	(323) 881-6898	jrhargra@lasd.org	Sheriff's Department
Catron, Bill		yes	(562) 345-4127		wmcatron@lasd.org	Sheriff's Department
Cuevas, Tom		yes	(323) 881-3711	(323) 780-8811	tcuevas@lasd.org	Sheriff's Department
Sella, Troy		yes	(323) 980-2282	(323) 415-1853	tesella@lasd.org	Sheriff's Department
Smith, Charles B.		yes	(323) 267-3476	(323) 415-3031	cbsmith@lasd.org	Sheriff's Department
Sun, Peggy		yes	(323) 267-2464	(323) 415-2674	ptsun@lasd.org	Sheriff's Department
Kelfer, Deborah	Consultatn	yes	(310) 727-4670	310) 727-7073	deborah.kelfer@nc4.us	NC4
Thornton, Jim		yes	(323) 267-2516	(323) 415-3176	jcthornt@lasd.org	Sheriff's Department

Appendix 4

Survey

Data Sharing Departmental Survey

1. Department

(Click here to choose)

2. Rater

Name

Title

Phone Number

email

3. Role

Data Streams/Sources

4. Source: DPW

	No value	Some value	High value
Road closures (locations, time, severity)	○	○	○
Dispatch info. (type, location, time, severity, alerts)	○	○	○
Rainfall (location, time., amount, alerts)	○	○	○
Flood channel velocity (location, time, velocity/height, alerts)	○	○	○
Dam levels (location, time, height, alerts)	○	○	○
Construction projects (type, location, time, impact)	○	○	○
Traffic Flow (location, time, status)	○	○	○
Public alerts (activation status, reason, alert)	○	○	○

5. Source: Fire

	No value	Some Value	High Value
Dispatch (call type, location, time, severity, alarm)	○	○	○
Incident reporting (validated type, location, time, etc.)	○	○	○
HazMat (handlers/generators, location, hazard level, etc.)	○	○	○

	No value	Some Value	High Value
Permits (type, location, status/violation, etc.)			

6. Source: OEM

	No value	Some value	High Value
Real-time earthquake monitoring, magnitude, location, time, etc.)			
EMIS (large scale event report info. From coordinators)			

7. Source: ISD

	No value	Some Value	High Value
Network Operations Center (network status/saturation, location, time, alerts)			
County building status (location, status, time, severity, alerts)			
611 Phone Service (County phone network status, location, time, alerts)			

8. Source: Public Health

	No value	Some Value	High Value
Hospital admissions (location, diagnosis/treatment, date, et.)			
Hospital availability (location, availability, date/times, etc.)			
Reportable disease (type, location, date/times)			

9. Source: Sheriff

	No value	Some value	High value
Incident data (call type, location, time, alert, etc.)			
Alert notifications (type, status, time, etc.)			
Incident/Criminal records (validated incident type, dates/times, alert, etc.)			

10. Please identify any barriers that might exist in the sharing information with other County or public agencies.

11. Please identify other County or public agencies that could provide data to improve your department's efficiency and effectiveness.

12. Please provide examples of how your Department can benefit from the day-to-day sharing of data/information with other County and outside agencies.

13. General comments on sharing data and information

Submit Survey | Reset